IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

SKYLINE SOFTWARE SYSTEMS, INC.,

       Plaintiff,

  v.

KEYHOLE, INC., and
GOOGLE INC.

       Defendants.

CIVIL ACTION NO. 06-10980 DPW

REPLY IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF NONINFRINGEMENT

[PUBLIC REDACTED VERSION]

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I.   **INTRODUCTION**

The '189 patent claims highlight the particular choices made by the inventors for their system of managing the data needed for rendering three-dimensional scenes. Google's motion for summary judgment of noninfringement focuses on the limitations that illustrate the fundamental differences between the concerns of the '189 patent inventors and the concerns of the Google Earth developers - differences that led to very different designs for their respective systems.

As the party bearing the burden of proof on infringement, Skyline was required to present competent evidence to support an infringement finding by a preponderance of the evidence. *August v. Offices Unlimited, Inc.*, 981 F.2d 576, 580 (1st Cir. 1992) ("[T]o avoid summary judgment, [the nonmovant] must be able to point to specific, competent evidence to support his claim. Mere allegations, or conjecture unsupported in the record, are insufficient to raise a genuine issue of material fact."); *see also Federal Deposit Ins. Corp. v. Fonseca*, 795 F.2d 1102, 1110 (1st Cir. 1986) (summary judgment affirmed where nonmovant failed to proffer admissible evidence in opposing motion); *Finn v. Consolidated Rail Corp.*, 782 F.2d 13, 15-17 (1st Cir. 1986) (summary judgment affirmed where nonmovant failed to establish a genuine issue of material fact by identifying any specific, admissible evidence in support of essential element of her claim).

Skyline has failed to meet this burden. While Skyline purports to deny the undisputed facts, it does so without supporting evidence. Instead, Skyline relies on unsupported recitations of immaterial facts, its disregard for the claim limitations, and incorrect legal arguments in opposing this motion. That is insufficient to defeat summary judgment. The undisputed material facts demonstrate that Google Earth does not meet each and every limitation of the asserted claims of the '189 patent.

Skyline also fails to mention, let alone demonstrate, how any of the limitations of the '189 patent claims are met under the doctrine of equivalents. It only argues in a footnote, without evidentiary support, that Google Earth's data structure is equivalent to the claimed "hierarchical structure." Summary judgment of noninfringement should therefore be granted. At the very least, this Court should grant partial summary judgment under Rule 56(d) (summary adjudication) of no infringement under the doctrine of equivalents due to Skyline's complete failure to present any evidence to support an equivalence theory.

II.   ARGUMENT

A.   Google Earth Fusion, Google Earth Server, and the Geo Coder Server Do Not Infringe the Asserted Claims of the '189 Patent

With respect to the Google Earth Fusion, Google Earth Server, and Geo Coder Server products there is no genuine dispute of fact. *See* Skyline's Rebuttal to Google's Undisputed Facts ¶¶ 1-9. Skyline makes no element-by-element infringement analysis, and offers no evidence showing that Fusion, Server, or the Geo Coder performs the steps of the '189 patent method. That alone resolves the issue in Google's favor. There can be no infringement unless each and every limitation is met by an accused product, and Skyline has not and cannot show that Fusion, Server, or the Geo Coder meets any of the limitations of the asserted claims of the '189 patent. *See* Skyline's Noninfringement Opp. at 5-8.

In an attempt to capture these products, Skyline tries to broaden the scope of the invention beyond what is claimed. It argues that a "hierarchically structured database is an element in every claim of the '189 Patent." *Id.* at 6. Not true. The claims are written from the standpoint of the client software and cover providing and downloading "data blocks belonging to a hierarchical structure"; they do not cover the database itself. Skyline then argues that a "'remote server' [is an] element recited in each of the asserted claims of the '189 Patent." *See id.*

at 7. Not true. The claims cover "downloading from a remote server" additional data blocks and a "communication link" to a remote server; they do not cover the remote server. The Fusion, Server, Geo Coder products do not download from a remote server data blocks belonging to a hierarchical structure, and thus none of them infringes the claims of the '189 patent. *See* Google's Noninfringement Motion at 9.

That Fusion, Server, and the Geo Coder are part of a larger integrated suite of Google Earth products does not relieve Skyline of its burden of proving that each of these products performs some step of the claimed method. Simply *accusing* something of infringement is not enough to meet the burden of *proving* infringement. ████████████████████████

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████████████████████ *Id.* at 6-7; *see also* Skyline's Rebuttal to Google's Undisputed Facts ¶¶ 6-9. It does not show that these products practice the limitations of the asserted claims.

In apparent recognition of this fact, Skyline resorts to arguing that Fusion, Server, and the Geo Coder contribute to and/or induce infringement by users of the Google Earth client software. *See* Skyline's Noninfringement Opp. at 8. Such an argument first reveals that the Google Earth client software is the only Google product genuinely at issue in this lawsuit. It is the use of the Google Earth client software that Skyline is accusing of infringement, not the use of Fusion, Server, or the Geo Coder. Moreover, Skyline's failure to cite any evidence in support of its indirect infringement theories is fatal.

Fusion, Server, and the Geo Coder have no place in this lawsuit. This Court should thus grant summary judgment of noninfringement with respect to these products.

B.   **The Google Earth Client Software (Google Earth) Does Not Infringe the '189 Patent**

1.   **Google Earth Does Not Infringe Any of the Asserted Claims**

a.   **Google Earth Does Not Meet the *"downloading from a remote server one or more additional data blocks ... if the provided block from the local memory is not at the indicated resolution level"***

It is ironic that Skyline should accuse Google of rephrasing the "downloading ... if" claim limitation when it is Skyline that seeks to redefine the specific conditional required by the limitation. The '189 patent conditions the download of additional data from a remote server upon a "determination that the provided block from local memory is not *at the indicated level.*" Chang Decl., Ex. 5 at 12 (emphasis added). Skyline downplays the significance of the specific determination that must be made, arguing vaguely that "what is required is a test of the resolution level of the data block," without saying what that "test" is. Skyline's Noninfringement Opp. at 9.

The '189 patent, however, is not so vaguely indistinct. It requires more than just any test of the resolution level of the data block. It seeks to avoid having to download data blocks from a remote server when data blocks with the indicated resolution level are already in local memory. '189 patent at cols. 3:50-61, 11:62-64. Therefore, not just any determination of resolution level will do; there must be a determination that the provided block from local memory *is not at the indicated level.*

This limitation represents a key difference between Google Earth and the '189 patent. While the patent claims ensure that there will be no downloading from a remote server when the data block in local memory is at the indicated level, ███████████████████████████████

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Skyline does not offer any evidence that actually disputes these facts or that meets Skyline's burden of showing that Google Earth makes the requisite determination. *See* Skyline's Noninfringement Opp. at 8-13; *see also* Skyline's Rebuttal to Google's Undisputed Facts ¶¶ 10-18. Instead, Skyline recites unsupported[2] immaterial facts that simply beg the question of whether Google Earth conditions downloading upon the specific resolution level determination claimed in the '189 patent. *See* Skyline's Noninfringement Opp. at 10-11. Skyline also omits

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[2] Much of Skyline's recitation of facts is made without citation to evidence. At other times, Skyline's citation to Dr. Feiner's expert reports and declaration do not support the propositions for which they are being offered. *See* Skyline's Noninfringement Opp. at 11, *citing* Exh. 35 (Feiner Report, 12/22/06 ¶¶ 86-88) and Exh. 7 (Feiner Decl., ¶¶ 17-19).

any claim or evidence in support of infringement under the doctrine of equivalents. Because this limitation is found in all the claims, summary judgment of noninfringement is thus appropriate and should be entered in Google's favor.

      b.   Google Earth Does Not Perform the Step of *"receiving from the renderer one or more coordinates in the terrain along with indication of a respective resolution level"*

Skyline continues its tactic of side stepping the requirements of the '189 patent limitations in its address of the "receiving from the renderer" limitation. While Skyline again pretends that Google's interpretation of the limitation is at odds with the Court's construction, it is Skyline that completely ignores the Court's construction.

Most obvious is Skyline's disregard for the Court's construction of "receiving from the renderer" as requiring that "something *distinct* from the renderer" receive coordinates and a resolution level from the renderer. Chang Decl., Ex. 5 at 10. Indeed, this construction is conspicuously absent from Skyline's analysis. *See* Skyline's Noninfringement Opp. at 13-15. It is absent because the undisputed facts make clear that Google Earth does not meet this limitation, and Skyline hopes to avoid the inevitable result of the undisputed facts. Google's Undisputed Facts ¶¶ 27-29.

Skyline reinterprets the Court's construction as simply requiring that the coordinates be passed to other source code. *Id.* at 14. That other source code, however, must be *distinct* from the "renderer" source code. ██████████████████████████ ███████████████████████████████ ███████████████████████████ The same software routine clearly cannot be distinct from itself. Yet, Skyline offers no evidence to dispute this, and makes no showing as to how Google Earth otherwise meets this limitation. *See* Skyline's Rebuttal to Google's Undisputed Facts ¶¶ 27-28; Skyline's Noninfringement Opp. at

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███. Google's Undisputed Fact

¶ 28; *see* Google's Noninfringement Motion at 13. Thus, Skyline fails to meet its burden of

presenting evidence that in Google Earth "something *distinct* from the renderer" performs the

step of "receiving from the renderer one or more coordinates in the terrain along with indication

of a respective resolution level." As this limitation is present in all claims, Google is entitled to

entry of summary judgment of noninfringement on the separate ground that the "receiving from

the renderer" limitation is not met.

Entry of summary judgment is also appropriate for the separate reason that Google Earth

does not have a "renderer" as claimed in the '189 patent. Skyline does not dispute the fact that in

Google Earth the three stated functions of the '189 patent "renderer" are not performed by a

single object. *See* Skyline's Noninfringement Opp. at 15; Skyline's Infringement Motion at 17,

25-26; *see also* Google's Undisputed Facts ¶¶ 24-26. Instead, it argues that the Court's

construction of "renderer" does not require the stated functions to be performed by a discrete

object or thing. *See* Skyline's Noninfringement Opp. at 15.

The Court, however, construed "renderer" as a "software and/or hardware object."

Chang Decl., Ex. 4 at 32. The Court even clarified that while "object" does not necessarily refer

to a software object in object-oriented programming, it does refer in a more general sense to a

thing. *Id.*, Ex. 5 at 9 n.7. Skyline cannot escape the consequences of the undisputed facts by

simply dismissing the Court's construction. Because there is not a single logical entity in Google

Earth that performs all three functions of the patent's claimed "renderer," Google Earth does not

meet the "renderer" limitation and thus cannot infringe the '189 patent.

Nor does Skyline argue that either of these requirements is met under the doctrine of equivalents. Thus, there is no evidence to support an infringement finding either literally, or by a substantial equivalent. Because the claimed "renderer" is required by all claims of the patent, the Court should grant Google's motion for summary judgment of noninfringement on this separate ground as well.

c. Google Earth Does Not Have "*data blocks belonging to a hierarchical structure*"

The asserted claims of the '189 patent all require "data blocks belonging to a hierarchical structure." The Court has construed this to mean that the data blocks must be "organized into multiple levels of resolution, whereby *each* level contains data blocks at the same resolution, and *each* successive level contains data blocks of a higher resolution than those in the preceding level." Chang Decl., Ex. 4 at 15 (emphasis added). █████████████████████

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Although Skyline tries to deny these facts, it does not offer any evidence that actually contradicts or disputes them. *See* Skyline's Rebuttal to Google's Undisputed Facts ¶¶ 33-36; *see also* Skyline's Noninfringement Opp. at 16-18███████████████████████

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████████████████████████████ *See* Feiner SJ Decl. ¶ 32-34. Accordingly, the undisputed evidence shows that Google Earth does not meet the "data blocks belonging to a

hierarchical structure" limitation.[3]

Unable to assail the facts, Skyline tries instead to divert attention from the undisputed material facts by focusing on irrelevant facts and incorrect or unsupported argument. Skyline first argues that the '189 patent also recognized the issue of aligning boundaries for data sets of different resolutions. *See* Skyline's Noninfringement Opp. at 16. Regardless of whether this is true, it is immaterial. The material fact is that Google Earth differs from the '189 patent in how it chooses to resolve these issues. The '189 patent chooses to maintain a strict resolution hierarchy so that each data block in the data structure can be referenced by coordinates and a resolution level, and identified and retrieved efficiently by coordinates and a respective resolution level. '189 patent at cols. 9:25-39, 11:21-30. ████████████████████

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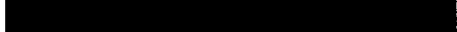
[3] In a footnote, Skyline argues alternatively that Google Earth meets the "data blocks belonging to a hierarchical structure" under the doctrine of equivalents. Skyline, however, provides no evidence or actual analysis in support of this theory. *See* Skyline's Noninfringement Opp. at 18 n.10. The Federal Circuit has also repeatedly found that conclusory expert testimony on the doctrine of equivalents is insufficient to defeat summary judgment. *See General Mills, Inc. v. Hunt-Wesson, Inc.,* 103 F.3d 978, 985 (Fed. Cir. 1997) (patentee has "duty to submit evidence tending to show equivalence with respect to limitations not literally met by the accused infringing device."); *Moore U.S.A., Inc. v. Standard Register Co.,* 229 F.3d 1091, 1112 (Fed. Cir. 2000) (conclusory evidence of equivalence insufficient as a matter of law).

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████████████████████████████ Skyline's mischaracterization of the evidence is incorrect and disingenuous.

In no event can Skyline's tactics detract from the undisputed fact that the Google Earth data structure does not organize data "into multiple levels of resolution, whereby each level contains data blocks at the same resolution, and each successive level contains data blocks of a higher resolution than those in the preceding level." Because this limitation is also found in all the claims, the Court should enter summary judgment of noninfringement on this separate ground as well as on the others.

      d.   **Google Earth Does Not Have "*data blocks describing three-dimensional terrain*" Under Skyline's Interpretation of that Term**

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████████████████████████████████. Google's Undisputed Fact ¶ 42; Feiner SJ Decl., Ex. C at ¶ 53. Skyline, however, advocates a very different interpretation in an attempt to preserve the validity of the '189 patent. *See* Google's Undisputed Facts ¶ 41; Skyline's Validity Motion at 21; Skyline's Noninfringement Opp. at 18-19. It argues that the only data that matters is elevation data - an argument directly contrary to the Court's construction of "terrain" and "data block describing three-dimensional terrain."

The only plausible claim interpretation that comes out of Skyline's logic then, is that a "data block describing three-dimensional terrain" must have all the data needed to render a section of the terrain, including elevation, image, *and* vector data just like the data block of the patent's preferred embodiment. '189 patent at col. 8:32-40. ██████████████████

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In an attempt to escape this result, Skyline misquotes[4] its own expert report. ████

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inconsistent and makes no sense in light of the Court's construction and the language of the '189

patent claims, which make no distinction between image data and elevation data.[5] If a block

with only image data is a "data block describing three-dimensional terrain," then downloading a

block with only image data must constitute downloading a data block describing three-

dimensional terrain. In which case, this limitation is met by the prior art, as explained in

Google's summary judgment motion on anticipation.

Skyline cannot flip flop on the proper construction of "data block describing three-

dimensional terrain" to suit its inconsistent infringement and validity arguments.[6] Either this

limitation is found in the prior art, or Google Earth does not have a "data block describing three-

dimensional terrain" and summary judgment of noninfringement on this additional ground

should be entered.

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[5] For a more complete discussion on the proper reading of the Court's construction of "data blocks describing three-dimensional terrain," see Google's Reply in Support of its Motion for Summary Judgment of Anticipation at 10-12.

[6] The same construction must be applied for the purposes of infringement and invalidity. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003), *citing W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 842 F.2d 1275, 1279 (Fed. Cir. 1988) ("It is axiomatic that claims are construed the same way for both invalidity and infringement.").

2.   **Google Earth Does Not Infringe Claims 3 and 14 for the Additional Reason that It Does Not Perform the Step of "*downloading ... wherein blocks of lower resolution levels are downloaded before blocks of higher resolution levels*"**

Claims 3 and 14 of the '189 patent are not infringed by Google Earth for all of the reasons set forth above. In addition, these claims further require a particular download order whereby, "blocks of lower resolution levels are downloaded before blocks of higher resolution levels." Google Earth does not practice this download order limitation ████████████

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Skyline does not offer any evidence to dispute these facts.[7] It instead relies on flawed legal arguments in the hopes of defeating summary judgment. Skyline first argues that because the patent claims are open-ended "comprising" claims, it does not matter that there are "extra steps" whereby downloads are not ordered from low to high resolution, so long as some part of the download requests are ordered low resolution before high resolution. *See* Skyline's Noninfringement Opp. at 20. Skyline misapplies the law. While the "comprising" language allows the claimed method to have additional steps, it does not eliminate or alter the limitations required by each recited step of the method. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1271-72 (Fed. Cir. 1986) (explaining that while "comprising" permitted additional steps

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[7] Skyline purports to deny this fact in its Rebuttal to Google's Undisputed Facts, but it does not cite any competent evidence. It cites Exh. 7 (Feiner Decl. ¶¶ 41-42) to dispute the fact that Google Earth will request higher resolution data before lower resolution data, but there are no paragraphs 41-42 in Exh. 7. *See* Skyline's Rebuttal to Google's Undisputed Facts ¶ 46. It also misstates its own expert reports in saying that Google Earth "then many [sic] order additional higher level data blocks," when in fact, its expert report says the exact opposite (Haight Decl. Ex. 38 at 16): "Additional coarser image data may then be requested at lower priority." *Id.* ¶ 47.

when used as a transitional term in a method claim, it did not affect the scope of the particular structure recited within the method claim's step). The '189 patent's requirement that data be downloaded in low to high resolution order is one step of the claimed method, and must be met by Google Earth for there to be infringement.

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Google Earth also does not receive data in the order requested, let alone in the low to high resolution order required by claims 3 and 14.[9] Google's Undisputed Facts ¶¶ 48-49. Skyline tries to circumvent the Court's construction of "downloading" by re-hashing claim construction arguments that data need not be received in a particular order. *See* Skyline's Noninfringement Opp. at 21-22. The parties already briefed this issue during claim construction, however, and the Court has already rejected Skyline's arguments in adopting its construction of "downloading" as "requesting over a network from a separate computer and receiving on a local computer." Chang Decl., Ex. 5 at 8. Therefore, the claims not only require data blocks to be requested in low to high resolution order, but to be received in that order as well.

Skyline cannot avoid summary judgment by misapplying the law or ignoring the Court's

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[8] Also noteworthy is Skyline's failure to cite any evidence in support of this claim.

[9] Skyline argues that by chance data will be received in a coarse to fine manner. *See* Skyline's Noninfringement Opp. at 21. Skyline bears the burden of producing evidence that this is in fact the case, but instead offers no evidence to support this argument. *Id.* In any event, such chance ordering is not the download order method contemplated by claims 3 and 14. *See* Google's Noninfringement Motion at 14; Feiner SJ Decl. ¶ 42.

claim construction. Google Earth does not request data in the order required by claims 3 and 14 and does not receive data in that order. Google's Undisputed Facts ¶¶ 46-48. Skyline does not have any evidence that disputes these facts. Skyline does not present any doctrine of equivalents evidence or analysis. Summary judgment of noninfringement is therefore appropriate for claims 3 and 14 on this additional ground.

3. **Google Earth Does Not Infringe Claims 7-9, 18-19, and 22-24 for the Additional Reason that It Does Not Perform the Step of** *"downloading from a remote server excess blocks not currently needed by the renderer to fill up the local memory when not downloading blocks required by the renderer"*

There is no dispute of fact with respect to the "downloading ... when not downloading blocks required by the renderer limitation." ███████████████████████

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In construing this limitation, the Court has already rejected the notion that this limitation is met by the mere download of data not needed for display of the current viewpoint. Chang Decl., Ex. 5 at 18 (rejecting Skyline's argument that the only blocks "required by the renderer" are those immediately necessary for the display of the current view). The Court also explicitly rejected Skyline's argument that this limitation is met because blocks which are no longer visible may still be fetched, stating that "there will often be a queue of data blocks, some of which may not be needed any longer, that have been requested by the renderer, but not yet downloaded" and that this did not constitute the download of excess data blocks "when not downloading blocks required by the renderer." *Id.* at 19.

As recognized by this Court, the "when not downloading blocks required by the renderer" contemplates the separate download of only excess blocks when the download queue generated in response to coordinates received from the renderer is empty. *See* Google's Noninfringement

Motion at 20; *see also* Feiner SJ Decl. ¶¶ 48-49. ███████████████████

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blocks required by the renderer."

III.   CONCLUSION

For the foregoing reasons, Google respectfully requests this Court grant its motion for

summary judgment of noninfringement on each of these separate and independent grounds.

Dated: February 9, 2007   Respectfully submitted,

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Certificate of Service

I hereby certify that, on February 9, 2007, I caused a true and accurate copy of the foregoing document to be served upon all counsel of record for each party by complying with this Court's Administrative Procedures for Electronic Case Filing.

By: ____/s/Darryl M. Woo_____
         Darryl M. Woo